

REMARKS

In the Office Action mailed from the United States Patent and Trademark Office on March 8, 2005, the Examiner rejected claims 1-6 and 9-20.

Restriction Requirement

Applicant has elected Group I, claims 1-6 and 9-20 and withdrawn Group II, claims 7-8 without traverse.

Rejections under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-6 and 9-20 under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,397,552 to Weigold et al. in view of U.S. Pat. No. 3,617,382 to Natsis et al. Applicants respectfully traverse.

To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation . . . to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.** MPEP 2142.

The proposed combination of Weigold and Natsis fail to teach every element of the claimed inventions. Neither Weigold nor Natsis mention utilizing the baffles for bifurcation or separation of the gas flow. Rather, both Weigold and Natsis use baffles to “direct gas flow”. By obstructing and redirecting the gas around obstacles (baffles), the gas is forced to mix. The Examiner states that the baffles in Weigold, “... may include holes”. Office Action page 3.

Applicant requests that the Examiner provide specific reference to language or illustrations in Weigold or Natsis that teach using a hole for separation or bifurcation purposes as claimed in the present invention. In fact, the language in Weigold teaches away from incorporating bifurcation holes:

Baffle 270 is centrally positioned relative to the internal portion of the reactor chamber internal of liner ... such that **gases are caused to flow externally** outward toward and against liner 271. Accordingly a void space 273 is provided radially outward of baffle 270 from liner. Fig 15 illustrates alternate baffle 280 designed to **force gas flow centrally**. Specifically, baffle apparatus 280 is in the form of an annular ring or donut having a central aperture. Weigold, Column 12, Lines 42-51.

Weigold teaches directing gas flow to the outer edge of the chamber or centrally to the inner portion of the chamber. There is no discussion of bifurcation or separating the gas flow in any way. The mixing of gases is caused by the redirection and obstruction of the gas flow rather than bifurcation and recombination. These are very different types of gas mixing.

Likewise, Natsis also fails to teach bifurcating or separating the gases for the purpose of mixing. Rather, Natsis teaches directing liquids around variously shaped baffles/blades with rotation. Natsis, Figures 13, 14, 24; Column 2, Lines 1-19.

Independent claims 1, 9, 14, and 19 all include limitations directed at bifurcation utilizing a “hole” in the baffle element. Therefore, Applicant requests that the rejection be withdrawn.

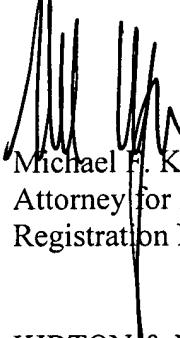
Likewise, dependent claims 2-6, 10-13, 15-18, and 20 include all of the limitations of one of the independent claims 1, 9, 14, and 19 and are therefore allowable for at least the same reasons.

CONCLUSION

Applicants submit that the amendments made herein do not add new matter and that the claims are now in condition for allowance. Accordingly, Applicants request favorable reconsideration. If the Examiner has any questions or concerns regarding this communication, the Examiner is invited to call the undersigned.

DATED this 9 day of May, 2005.

Respectfully submitted,


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DOCS-#825380-v1-Amendment_and_Response.DOC